him to temptations, and to try him by suffering, our reason may conjecture, but our faith is uninformed; and it is a fact which may be advantageously recollected by those who, on these accounts, insult Christianity, that the difficulties of which they complain belong not to Christianity alone, but to every creed which admits the responsibility of man, and the power and goodness of his Maker. But though Christianity does not tell us the *cause* of our calamities, she has not failed to point out their *cure;* in fostering those amiable affections which enable us to bear our own sorrows best while they most dispose us to alleviate the sorrows of others, and in holding out to us a clearer and brighter prospect of that life where Love shall reap his harvest of enjoyment, and where the happy and benevolent inhabitant of a better world shall neither feel nor witness affliction!

There are some inaccuracies in 'Cain' which we forgot to notice in their proper places, and of which one only is, perhaps, worth noticing. Cain is made, in p. 355, ignorant of the nature of death. He supposes death to be a being, and asks if he cannot wrestle with him? The same ignorance is expressed in p. 376, and in several other passages. Yet he elsewhere speaks familiarly of the *victims* whose blood his brother offered on Jehovah's altar, and whose slaughter must have pretty tolerably explained to him what was meant by the extinction of animal life.

There is also a note filled with furious and, as it appears, *unprovoked* personalities against Mr. Southey, of which we shall say nothing, since for a man of genius and a nobleman to have published such a diatribe, evinces a state of irritability with which expostulation would be vain, and of which reprobation is needless. This only we will say, that a writer so sensible to every attack, and so suspicious of every allusion, will do well, for his own peace of mind, if not from a better motive, to abstain from compositions of which the only effect can be to offend the honest prejudices, and unsettle the most estimable principles of the great majority of that nation who would gladly find a blameless delight in his volumes, and express a patriotic pride in his renown.

Art. XI.—1. *Researches into the Laws and Phenomena of Pestilence; including a Medical Sketch and Review of the Plague of London in* 1665, *and Remarks on Quarantine, &c.* By Thomas Hancock, M.D., &c. &c. 1821.

2. *A Treatise on the Plague, designed to prove it contagious from Facts collected during the Author's Residence in Malta when visited by that Malady in* 1813; *with Observations on its*

found in the volume of the Old Testament, we might be reduced to suppose, extraordinary as such a supposition would be, that the nation of Israel stood alone among all their neighbours, and among all nations of the world who have attained even a moderate degree of civilization, in their blindness to a truth which is tolerably conspicuous even to unassisted reason. But if Lord Byron will take the trouble to consult the 'Argumenta Immortalitatis Animarum ex Mose Collecta' of the same illustrious scholar whose words we have just cited; or if he will, calmly and without prejudice, compare the expressions used by Moses in speaking of the departure of Enoch to God; of the deceased patriarchs as still existing; and of 'the death of the righteous' as prayed for by Balaam; with the still stronger expressions in the book of Job, in the Psalms, in Isaiah, Ezekiel, and Daniel, he may be satisfied that, to the persons who used such language, the idea of a life after death was familiar, and that such expressions presuppose the nation to whom they are addressed to be equally acquainted with it and convinced of it.

It is not true, then, that the immortality of the soul was unknown to Moses or the Israelites. It is highly improbable that it was unknown to the first man or his children. And it is certain that the prospect of such a life after death is, to the virtuous man, a sufficient ground for trusting the goodness and justice of the Almighty, a sufficient comfort under all the evils incidental to his present condition. Or if, to men, such as men are, and oppressed, as they well may be, with the sense of their own imperfections, and an apprehension of the further anger of the Deity, an additional ground of hope is necessary, we may be forgiven if we point out, (though we have thus far avoided, as much as possible, all topics purely theological,) that mysterious *atonement* which was anticipated by the earliest as it is looked back to by the latest generation of mankind; which was shadowed in the bloody sacrifice of the Patriarch as surely as in the Eucharist of the Christian, and the beneficial effects of which we believe to have extended and still to extend to those who have not heard, as well as those who have received the Gospel.

The origin of evil itself is among those secrets of Providence which, if they do not surpass our present faculties, are, at least, not as yet communicated to us. It is one of the many vulgar errors by which the subject has been encumbered, to suppose that such a communication is found in the Book of Genesis. All which Moses relates is the first *appearance* of that evil which must have previously existed, the first demonstration of those hateful passions and that aspiring pride which have made labour and death no more than necessary to the well-being of nature. Of the causes which may have induced the Almighty to create man peccable, to expose him

its Prevention, Character and Treatment. By Sir Arthur Brooke Faulkner, M.D., &c. &c.

3. *Results of an Investigation respecting epidemic and pestilential Disease; including Researches in the Levant concerning the Plague.* By Charles Maclean, M.D., &c. &c. 1818.
4. *Minutes of Evidence before the Select Committee appointed to consider the Validity of the Doctrine of Contagion in Plague.*
5. *Miscellaneous Works of the late Robert Willan, M.D., &c. &c. comprising an Inquiry into the Antiquity of the Small-pox, Measles and Scarlet Fever, &c. &c.* Edited by Ashby Smith, M.D., &c. &c. 1821.
6. *Historical Sketch of the Opinions entertained by Medical Men respecting the Varieties and the Secondary Occurrence of Small-pox; with Observations on the Nature and Extent of the Security afforded by Vaccination against Attacks of that Disease.* By John Thomson, M.D., &c. &c. 1822.

IN prosecuting inquiries relative to subjects on which the judgment, rather than the comprehension, is to be exercised, we often find it difficult not only to avoid undue bias, but even to know how far we are under the influence of a prejudice that has perhaps been insensibly acquired, and has grown with our growth: but there are other impediments to correct inference respecting speculative truth than those arising from the above source—and, some of them, of a nature exactly opposite; for the very apprehension of yielding with too much facility to generally admitted dogmata may, and not unfrequently does, give rise to an unwarrantable and unseasonable scepticism.

The great discrepancy of sentiment that prevails on the contested points of pestilence and plague, or rather on the manner of their production and the laws that regulate their continuance and spread, must in part, at least, be ascribed to this submissive dependence upon prescriptive rule on the one hand, and the determination to disbelieve every thing that has obtained pretty general credit, on the other. Thus, while one speculatist tells you that a skein of silk may contain in its twinings poisonous matter, sufficient, when let loose, to cause the sickness and death of thousands; another, with the same data before him, not only denies that the venom is thus transportable, but even stoutly contends for its non-existence, and maintains that the apprehensions excited on the score of pestilential visits have no more foundation in truth than nursery apparitions or monkish miracles!

'It is shown (says Dr. Maclean), by conclusions deduced from undeniable premises, that it is impossible epidemic diseases should ever depend upon contagion;' and he goes on to state that 'the prevalent notion of contagion being an inherent quality of pestilential

pestilential fever is absurdly derived from a popish rumour of the sixteenth century;' while, on the other hand, one of the most strenuous and able supporters of the opposite doctrine, Dr. Granville, maintains, 'that the disease called plague is never epidemic; that *it is independent of all influence of the atmosphere;* that it commits its ravages when no possible cause of unhealthiness exists, and is neither checked nor promoted by the south or north winds, by the winter or summer, by an elevated or low situation.'

Between these extreme points, others take their stand at different distances; some of them more and some less readily admitting the principle of contagion as connected with plague, but all denying its abstract power and independent essence.

Did these questions involve matter merely of curiosity, or even were the interest they excite confined to the faculty of medicine, we should be justified in leaving them to the decision of the medical journalists; but as inferences of a general and even national concern depend upon the admission, or rejection, or qualification of premises on the subject of pestilence, we have considered this subject as properly falling within our own province, and shall proceed to canvass the particulars it embraces somewhat at large, with a determination to present the arguments of the contagionists, anti-contagionists and moderates, without any admixture of our own sentiments. It will soon, indeed, be seen that we have opinions of our own, and that they do not exactly coincide with those of any writer in the controversy; but, in propounding them, we will endeavour so to separate them from the deductions of others, that the reader shall be furnished with a fair opportunity for the exercise of unfettered comparison and unbiassed judgment.

The controversy, as we have just intimated, has been marked by extremes of confident assertion, and occasionally, it is painful to add, of intolerant dogmatism. In the list placed at the head of the present Article will, however, be found some exceptions to that dictatorial tone and that extravagant tenour of assumption which are not only at variance with the canons of legitimate reasoning, but even calculated to injure the cause they are intended to serve.

To the volume of Dr. Hancock we are desirous of calling especial notice, not with a view to invidious comparison, but as being a comprehensive and candid investigation of the whole question: the spirit of *system* may perhaps be occasionally seen insinuating itself among the pages of this work; and in the remarks on another learned and candid writer (Sir Brooke Faulkner) we thought we detected a little too much leaning to favourite inference; but, upon the whole, we may confidently assert that it

it has not often fallen to our lot to inspect the production of a controversial author so free and fearless in its admissions, or so candid and temperate in its conclusions, as that to which we refer.

At first sight, the works of Willan and Thomson may appear to have no direct connexion with the topic about to be discussed; it will shortly, however, be perceived for what purpose they are added to the list of volumes bearing upon the present controversy.

But it is time to proceed to the formal enunciation of the leading question: Are we right in supposing plague to be a specific disease capable of being conveyed from one part of the world to another, either by persons or goods, so as to render necessary restrictions upon indiscriminate intercourse? In other words, is pestilence a contagious and transportable, or is it merely an infectious and local distemper? Many minor points are, of course, included in this interrogatory, which will be noticed as we proceed.

Contagion? Infection? what is the precise import of these two terms, which, it will be remarked, have been just employed in some measure antithetically; but which, in strict propriety, are not perhaps open to this contrasted signification. Contagion indeed implies contact and infection, although it does not express more than the effect produced, yet necessarily supposes touch, upon the principle that nothing in the material world can act but where it is. The difference, then, rather hinges upon the *mode* in which the communication or contact is brought about; and an infectious would be distinguished from a contagious disorder in something like the following manner. A number of persons may be assembled in a vitiated atmosphere, occasioned by something emitted from the body of one or other of the individuals present; or by the mere confinement of the air itself, animal respiration being a vitiating process; or an exhalation peculiar to the place; if then, any of the persons so circumstanced become decidedly ill, the induced sickness would be considered as a disease resulting from infection. Now, take one of these subjects from the infectious atmosphere, place him where every thing, with the exception of his presence, is conducive to health, and then, if from communicating with him, others fall into a disease which resembles his, the morbid condition thus engendered would be considered an absolute contagion. Even in this last instance however the actual contact of bodies may not have taken place, and therefore the terms employed to distinguish the two kinds of morbid being, so far from elucidating, rather obscure the question.

And in our minds a great deal of the confusion which still involves the controversy, arises out of what at first view might seem

seem to render it more definite and precise, for authors have been led to infer a distinction between contagious and infectious diseases beyond the warranty of fact; and have thus imagined specific and abstract differences in complaints, which are properly ascribable to time, place, and circumstance. On this rock we believe it is that both the advocates and oppugners of contagion in pestilential maladies have split; each readily acknowledging, without sufficient reason, that some diseases are not only peculiar and absolute in their origin, but that such peculiarity and absolute identity has been preserved from their commencement to the present time.

The reasonings of Dr. Willan and Dr. Thomson (perhaps in some measure unconsciously to themselves) seem to run counter to the above notion of a disorder's transmission from age to age, and from one country to another. It is supposed by most of those who have given their thoughts to the subject, that the small-pox and measles, or, as they are termed, the specific contagions, were unknown to the ancient physicians of Greece and Rome, and that the Arabian writers were the first to observe and record them. Dr. Willan has brought a great deal of learning to the support of the opposite doctrine; if he does not quite succeed in establishing the point for which he contends, may not his failure be partly at least referable to the principle now adverted to? and may not the want of entire correspondence between the ancient accounts of what our author supposes to be small-pox, and the small-pox as it appears in this age and country, be attributable to the actual change effected by the lapse of time upon a distemper which is still radically the same, or rather which sprang from an identical source, but has had new features impressed upon it by the hand of time? Did indeed this same small-pox, as some contend that it does, arise, spread, decline, and disappear, without apparent modification from external circumstances, our opinion on its laws and limits would be very different; but this assuredly is not the case. Do we not in fact find that the complaint is now epidemic and general, now partial and infrequent; that it is at one time mild, at another time severe, just as it happens with those febrile derangements to which the anti-contagionist attaches no specific notion? and are not these so many evidences of a susceptibility in the distemper, to modifications beyond the admission of the contagionist? It is a very curious fact, (pointed out by Dr. Willan) that Aaron a physician and presbyter of Alexandria, who wrote in the beginning of the seventh century, has arranged the small-pox, measles, and pestilential bubo or carbuncle, as the products of one specific contagion; and very long after his time the two first diseases were considered identical—and were perhaps actually so. But, further, it is a very remarkable circumstance, that

that since vaccine inoculation has become general as a substitute for small-pox, we scarcely ever see or hear of those eruptive disorders to which the term *varicella* or chicken-pox has been somewhat vaguely applied. The fact no one will dispute; but opinion does not seem quite so unanimous as to the explanation of which the circumstance is susceptible. Dr. Thomson maintains, and we think justly, that all varioloid diseases spring from one source, and that the modified small-pox which so frequently follows vaccination and the chicken-pox of former times are in fact the same distemper, rendered different in their complexional character by the present mild mode of inoculating—inoculating, we say, for it would seem that even the genuine vaccine virus is but a modification of the small-pox poison, disarmed greatly of its noxious power by its having become the disease of a brute animal.

It is worthy of remark, as bearing upon the present question, that the nosology of one age and country is almost a sealed volume to the student of diseases in distant times and places; and this, among other reasons, is the cause why the study of ancient authorities in medicine has fallen into comparative neglect. Each succeeding period cannot however be imagined to create new distempers, or to effect any thing further, than materially to change the aspect, and modify the circumstances of the old ones; but, then, this modification in the course of centuries comes to be so considerable that scarcely any traces of the prime malady are to be recognized. Even among ourselves, how various are the shades of a disease which yet is nosologically regarded an identical essence? this indeed is so proverbially the case, that many of our modern free-thinkers in medicine make a mock altogether of system, of classification, and of nomenclature as applied to morbid states; and even those who are less disposed to cast away as scholastic rubbish every thing like rule and order in designating distempers, cannot but admit the frequent fallacy of the best nosological charts. In Dr. Bateman's recent, and in some respects excellent work on Cutaneous Affections, we find an abundance of error and self-contradiction to spring from the source to which we now refer. For instance, we have *prurigo* and *psora* marked out as not only differences in the same species, but as absolute varieties of disorders in reference to the class to which they belong; and yet, it is admitted by the framer of the classification itself, that the former of these affections may pass insensibly into the latter; an admission which furnishes sufficient proof that the scheme of arrangement is arbitrary, and in a great degree inefficient.

There is another fact of importance as bearing upon the doc-

trine we now inculcate, namely, that a *degree* of disorder will sometimes result from exposure to specific affections, without the actual and absolute induction of the malady itself. Those who nurse children in small-pox having had the small-pox themselves are not unfrequently the subjects of a certain indisposition in consequence, which, neither in kind nor quantity, would be considered small-pox; and so on through the whole range of distempers to which the body is incident. In a word, a physical atmosphere may possess a sufficient quantity of contaminating influence without engendering absolute distemper.

Again: who has not made the observation, that since our soldiers in Egypt became the subjects of ophthalmia, inflammations and other disorders of the eyes, but still not actual ophthalmia, have been greatly on the increase? The Walcheren fever too, although owning a distinct and peculiar origin, frequently sowed its seeds in the constitution of individuals, the fruits of which, when ripened in this country, bore a different character from that which they would have assumed had the disease at once broke out among the Walcheren marshes. Such is the modifying power of time, place, and circumstance, evidenced even in phenomena that present themselves to our own observation; and it seems not unfair to suppose that the lapse of ages, the different habits of modern from ancient times, may make disease insensibly branch out into almost innumerable ramifications from a very few roots.

To assert that some species of sickness are not more independent, and less liable to change than others, would be obviously to fly in the face of fact; still, however, there is sufficient evidence in favour of the assumption, that even the most fixed and specific affections are gradually operated on, and ultimately converted in the way we have endeavoured to illustrate.

It may be thought that we have conceded considerably to the anti-contagionist in thus breaking down the artificial barriers by which morbid conditions have been separated; but so far are we from subscribing to that proposition which declares the incommunicability of distempers except in a very limited number and defined character, that we even conceive a power of transmission in maladies which some of the most decided supporters of contagion in plague do not generally admit. Colds, as they are called by a sort of metonymy, run in families. The wife that has nursed a consumptive husband often follows him to the grave—the victim of the same disease—and in many cases, as above intimated, the otherwise well receive a *measure* of sickness from being for a length of time near the ill, that cannot fairly be attributed to any other cause than a something emitted from the former and impregnating, so to say, the body of the latter. If you

you ask for the proof of this, we reply by requesting you to point out the actual matter in a palpable shape which gives the small-pox, when it is not received by inoculation—this substance equally eludes the ken of the experimentalist with all other disease-creating agencies.

Upon the whole, then, we are of opinion, that the distinction set up between contagious and pestilential disorders does not, in truth, obtain to any thing like the extent commonly supposed; and that the specific quality of *variola* itself is but different in degree, not in kind, from the mere infection of plague. We believe that both are occasionally spontaneous in their origin,* more or less communicable in their nature—pass from individual to individual in the same manner—and are susceptible of modification, in a different degree, we allow, but still in both cases to an almost incalculable extent.

So much for our own sentiments respecting the laws of contagion and infection. We now proceed to a general but cursory review of the authors who have recently written on the subject; Dr. Maclean, Sir Brooke Faulkner, and Dr. Hancock—the first a decided anti-contagionist,—the second as decided in his sentiments on the opposite side,—and the last, a believer certainly in contagion, but who does not give to this power abstract qualities, or conceive it to be the sole agent by which pestilence is generated and diffused.

It may be right, however, previously to say a few words respecting the opinions of our forefathers in medicine on the subject of pestilential influence, and the contagious qualities of disease.

It is rather remarkable, that on this head the authority of the ancients is somewhat slender. The great founder of the art never once mentions contagion as a cause of disease, nor do we find this source of disorder alluded to in the writings of Celsus, which is curious, since these writings constitute a sort of summary of all that was known and believed at the time they were composed. This silence of the two greatest authorities among the ancients has been seized on (as we hinted above) by Dr. Maclean, who maintains that the belief in contagion is of modern origin; that

* We may be thought erroneous in talking of the *spontaneous* origin of small-pox; but certain it is, that this affection often make its appearance and disappearance quite as unaccountably as other epidemic maladies; nay, more so even than those epidemics that are more obviously of local origin. The anti-contagionist will, perhaps, say, that in these cases the seeds of the distemper have been made to germinate by the particular circumstances of the district in which it breaks out and spreads; but in this he concedes much to the opposite party, for the believer in specific contagion as applied to plague and typhus, and yellow fever, accounts in the same way for the prevalence and decline of the last mentioned maladies.

the ancients had no notion of diseases being thus propagated, and that the doctrine of such transmission was invented by Pope Paul III. in 1547, for the purpose of striking a panic among the fathers of the council of Trent, and to serve as a pretext for translating that council to Bologna.

Now it would not seem very likely that an ecclesiastic ruler should have recourse to a stratagem which implies the introduction of a novel belief respecting a medical dogma; and we should find much difficulty in giving credence to the hypothesis of Dr. Maclean, were there even no absolute authorities against its admission; but Dr. Maclean has not dealt fairly with the subject in concluding, from the silence of Hippocrates and Celsus on the question of contagion, that therefore the ancients did not recognize the fact of a disorder's communication by contact or fomes. Galen and Aretæus occasionally make use of expressions which imply the circumstance of contagion being an admitted principle. The former likens plague, in respect to its communicable qualities, with itch or inflammation of the eyes, *συνδιαλριβειν τοις λοιμωδοισιν επισφαλες, απολαυσαι γαρ κινδυνος ὡσπερ ψωρας τινος η οφθαλμιας*, than which expressions nothing can be stronger to the point; and the latter even goes so far as to employ terms the very use of which supposes the belief to be prevalent that plague was of a contagious nature; *ϑ μειον η λοιμῶ*, says Aretæus, when treating of another disorder, the contagious properties of which he is desirous of illustrating.

That the ancient classics in medicine are generally without much allusion to the doctrine of contagion, may not improbably be attributed to their having thought it useless to discuss a matter so obvious in itself, and so freely admitted by all parties: in consonance with this opinion, we find more copious references to the subject by the historians and poets of antiquity, than by the strictly medical writers. We are told expressly by Dr. Willan, (we have not had an opportunity of referring to the work itself,) that 'Evagrius, in his Ecclesiastical History, proves himself well acquainted with the nature of contagion, and the operation of fomes; for he very correctly enumerates the various modes in which pestilential or contagious diseases are disseminated;' and this author, let it be observed, wrote just ten centuries prior to the time at which Dr. Maclean dates the first divulged notion on the subject of contagion, as applicable to epidemic and pestilential diseases.* We forbear to quote the ancient historians and poets,

* Howel, as quoted by Freind, particularly alludes to the accounts given both by Evagrius and Procopius of the plague at Constantinople; and Freind himself mentions the representation given by Agathias, another of the Byzantine historians, in the following

poets, since their allusions to the subject of pestilential contamination must be familiar to most of our readers; and since those who deny that contagion was known to the ancients, might object to the authority of writings not strictly of a scientific cast, when used to establish a scientific principle. Certain it is, moreover, that the line of demarcation between infectious and contagious distempers is of modern origin; but, if the course of reasoning into which we have briefly entered be correct, the ancients, by neglecting to recognize this proposed division, were not therefore farther than the moderns from the absolute truth.

We now proceed to give a brief summary of the views entertained on the subject of contagion by Dr. Maclean, Sir Brooke Faulkner, and Dr. Hancock—and we select these as representatives of many others, in order to avoid unnecessary repetition. It has already been stated why, in this general review, Dr. Hancock claims the most detailed notice.

The positions of Dr. Maclean, in reference to the subject under discussion, are briefly the following. Epidemic diseases, comprehending all the intermediate degrees of affection between the slightest catarrh and the most destructive pestilence, depend upon some change in the atmosphere, as their immediately exciting cause, the predisposition to be affected by such changes being referable to various combinations of heat, moisture, soil, situation, food, and water, corporeal labour, the passions, and motions of the mind; and in Christian communities (he adds) the belief in contagion contributes to the production of the morbid effect resulting from the above circumstances of predisposition and excitation.

'The effects of the action in its different degrees and modifications (says Dr. Maclean) of a power of diffusive and constant operation, which is the appropriate stimulus of the grand organ of respiration, and by which all the external parts of the body are perpetually pressed and enveloped, must necessarily be infinitely various. It is directly or indirectly the source of a great portion of all the maladies which afflict mankind. Its slighter consequences, which would not of themselves prove dangerous, frequently become the foundation of diseases which prove mortal; those which already exist, it aggravates, and renders some fatal which would otherwise terminate in recovery.

following manner. Having alluded to Procopius and Evagrius, Freind goes on to say, 'Et Agathias, qui secundam ejus invasionem describit, quæ Constantinopoli accidit A. D. 568, diserte ait, plerosque momento temporis obiisse, sicut a vehementi apoplexia; et eos quibus maximæ natura vires suppeterent, quinto diei nunquam superfuisse. In Atheniensi autem, morbus ad septimum vel nonum diem ibat, qui quidem usitati erant mortis dies. *In eadem contaminati sunt, quicunque ad ægros accedebant; in hoc vero, idem non obtigisse plane declaratur.*'

Here we have one of the highest authorities in medical literature for a distinct allusion to the principle of contagion having been made in the sixth century.

'*Popular tradition, then, seems justified in regarding common colds as the foundation of almost all the ailments of mankind; and the great father of physic, in considering the air as the cause of almost every malady.*

'The yellow fever of the West Indies, and of America, the fevers of Bengal, Bencoolen, Batavia, Bulam, Cadiz, Gibraltar, Andalusia, Malta, Walcheren, and Leghorn, &c. &c. &c. (for so the epidemics which have occurred at these several places, have been most improperly denominated) as well as every variety of remittent and intermittent fever, are all only modifications of one and the same disease, produced by modifications of the same cause, and yielding to modifications of the same remedies.'

From this it will be seen that Dr. Maclean is a decided unbeliever in the specific nature of any of those maladies which come under the denomination of plague; and it is likewise sufficiently evident, that he conceives each and every case of plague to be contracted, not by communication or contact, not by a something emitted from a sick person, and impregnating the well, not by a peculiar poison, as in the case of small-pox, but by the influence of atmospheric change assisted by several circumstances of predisposition; and that he is sincere in his opinions would seem sufficiently clear from the fact of his having voluntarily exposed himself to the pest-houses of Constantinople, and freely communicated for hours and days together with their sick inmates. Our readers will be eager to inquire whether he came from these exposures unaffected by disease? We have to reply, from the author's own statement, in the negative. Dr. Maclean candidly confesses that he was at length seized by the plague; but not, he still maintains, from the reception into his system of a specific virus, not from touching or handling the sick, but from being subjected to the malign influence of the plague *atmosphere*, the operation of which was materially aided by the several circumstances of mental agitation to which his duty exposed him.

It is matter of notoriety that pestilential distempers are in our day comparatively unfrequent in the north of Europe; and this fact is taken hold of by Dr. Maclean for the purpose of proving the indigenous and non-communicable nature of these maladies: 'the nations (he says) of the North generally have been advancing in cultivation, while those of the Levant have been retrograding; some of them, however, have either been stationary, or made less progress than others; and accordingly we find the provinces of Spain, some parts of Italy, the old Venetian provinces of Dalmatia, Istria, &c., many parts of Poland, and the Eastern frontiers of the Austrian dominions, as Hungary and Transylvania, little less liable to epidemic diseases than formerly; not because they are adjacent to Turkey, as has been inferred in conformity with

with belief in contagion, but because they are in so backward a state of cultivation.'

In the Minutes of Evidence taken by the Select Committee, formed for the purpose of inquiring into the validity of the doctrine of contagion in plague, Dr. Maclean assigns the following 'additional reasons' for his belief that epidemic and pestilential diseases never depend upon contagion.

'Because the laws of epidemic and those of contagious diseases are not only different, but incompatible; and because pestilences observe exclusively the laws of epidemics, of which they are but the higher degrees. Because no adequate proof has ever, in any single instance, been adduced of the existence of contagion in pestilence. Because, had pestilential diseases been contagious, consequences must have followed which have not taken place. Being capable of affecting the same persons repeatedly, they would never cease where no precautions are employed, (and in such case no precaution could avail,) until communities were extinguished. Turkey would long ago have been a desert. Because the assumption resorted to by the anti-contagionist, "that to the effect of contagion a particular state of the atmosphere is necessary to produce the disease," is only in other words an acknowledgment that a particular state of the atmosphere is its real cause. Because for centuries before any intercourse direct or indirect was established between this country and the Levant, or rather as far back as history extends, pestilence was at least as frequent in England as in the sixteenth and seventeenth centuries, when our commercial intercourse with Turkey was considerable. Because when the free states of Italy traded both with the Levant and the north of Europe; when they were the carriers not only of the merchandize but of the troops of the principal powers of Christendom engaged in the crusades; and when they possessed Smyrna, Cyprus, Candia, Scio, Cephalonia, Caffa, and even Pera (a suburb of Constantinople); no apprehension was then entertained under a constant intercourse, of pestilence being propagated by infection, nor any precautions adopted by any nation for the prevention of such a calamity. Because during the century and a half which has elapsed since 1665, and in which there has been no plague in England, our commerce and intercourse with the Levant have been more extensive and more rapid than at any former period. Because there is no reason to believe that in modern times pestilences have undergone any revolution in respect either to their nature or to other causes, further than may depend upon the advancement or retrogradation of countries respectively in cultivation, civilization, or the arts of life; or upon an alteration in the seasons. Because, as contagion where it does exist is sufficiently palpable (it did not require the evidence of inoculation to show that small-pox always depends upon that source, and never upon any other) if it were the cause of pestilence, its existence could not for thousands of years have remained concealed. It must have been discovered and demonstrated to the satisfaction of the world, by the ancient physicians; and could not

now have been a subject of controversy among their successors. Because no person has at any period of history been known to arrive in England from the Levant labouring under pestilence. Because no person employed in purifying goods in the lazarettos of England, or of Malta, has ever been known to be affected with pestilence, which could not have happened if contagion had existed in the goods; and because such goods could not be exempt from contagion in particular countries, if that were the cause of plague. Because, after three hundred thousand deaths from plague have happened in one season in Grand Cairo, two hundred thousand in Constantinople, and one hundred thousand in Smyrna, as we are told, has repeatedly occurred in those places, and the clothes of the dead have been worn by their surviving relatives, or sold in the bazars, and worn by the purchasers, the disease, instead of spreading wider and wider, as would have inevitably have happened if contagion were its cause, (since in that case it could not fail to be carried in the clothes,) has, on the contrary, regularly declined and ceased at the usual periods. Because in those countries in which the plague is supposed to be introduced by means of contagion, conveyed by travellers or goods, as Egypt, Asia Minor, and Syria, it never occurs epidemically, but at particular seasons; although in other seasons travellers and goods from places in which the disease prevails, continue equally to arrive. And because in other countries, as Persia, which maintain a similar uninterrupted intercourse with places liable to frequent attacks of the plague, that disease never occurs.'

We have thus presented to our readers the principal arguments and allegations of Dr. Maclean against the presumption that pestilence is regulated by laws that are influential in contagious distempers. We now proceed to the work of Sir Brooke Faulkner, in which the opposite doctrine is maintained. The opinion of this gentleman is, that plague may actually be transported both by persons and articles of merchandize, and that moreover it may be received by, and propagated among, a people resident in a place the air of which is no otherwise conducive to disease than in having received a taint from the specific virus by which the existence of the malady has from the first been occasioned. Sir Brooke Faulkner believes further that ' plague is communicated only by contact or close association with the person or thing infected.'

The circumstances connected with the introduction of the plague which prevailed at Malta in 1813, are those upon which Sir Brooke Faulkner principally rests his opinion; and in his treatise, the title of which stands at the head of the present article, he endeavours to prove that Malta, so far from being favourable to pestilential origin, enjoys great advantages in respect to climate, soil, and habits of the people. He then goes on to state that the arrival of the San Nicolo, which took place under the

the following circumstances, was to all appearance the cause of the pestilence now adverted to.

'Two Turkey merchants shipped on board this vessel, at the port of Alexandria, a cargo of linen, flax, and leather, with some other articles. Part of the crew having died of the plague on their voyage to Malta, the vessel applied to the health department of the island on her arrival (the 28th of March) for admittance into port, previously using the precaution to notify her state, by hoisting a yellow flag with a black ball in the centre, this being the signal to indicate the actual existence of plague on board. Her application being acceded to, she was accordingly received into quarantine in the Marsachuchet harbour, within about a cable's length of several points of land and of the city of Valetta. The surviving part of the crew were taken into the Lazaretto, situated in a small island in the middle of the harbour. The captain of the San Nicolo and his servant sickened, in a day or two after their being received into the Lazaretto, and died, with indisputable symptoms of plague.'

In four or five days from this arrival the plague manifested itself in Valetta; and he considers the circumstance as next to demonstrative in favour of one event being the cause of the other. The first person attacked was the daughter of Salvatore Borg, a shoemaker, who died of what a Maltese physician considered a typhus fever. 'During the visit, however, our author observed on the chest of his patient, below the mammæ, two tumours which resembled carbuncles.' This was on the 19th of April. On the first of May the mother of this girl was attacked with fever, and complained of pain from a tumour in the groin. She died on the third. The husband was taken ill on the fourth, who had likewise affections of the groin and of the axilla. 'This man (says Sir Brooke Faulkner) continued to linger until the 12th of the month, when he died with unequivocal symptoms of plague.' A schoolmistress, in habits of intimacy with the family, is then attacked, and dies; afterwards a girl of the name of Grazia Pisani, who recovered after the bursting of a bubo: then Borg's father, and a second child of Borg; and, on the 17th, a relation of the schoolmistress, who had a carbuncle on the lower part of the back.

'Here then (says our author) we have traced the propagation of the disease from the first case in Valetta in eight distinct and well-authenticated instances, and all of them in a continuous line of communication with each other. The last six cases are given on the authority of medical reports published under the sanction of the government of Malta.'

The infection now became very general in consequence of unrestrained intercourse, and our author next pursues its progress into the Augustin convent, afterwards into the casals or inland towns

towns and villages, and, finally, into the island of Gozo by a man belonging to Casal Curmi.

'It rests upon respectable testimony (says Sir Brooke Faulkner) that this person, previous to his removal into quarantine, found means to conceal a box, containing wearing apparel, in the cottage where he resided; and that at the expiration of his quarantine he re-entered his cottage, out of which he took the box, and after paying a visit to Valetta, hired a boat and transported it to Gozo.'

Having remarked that the degree of severity which attended the plague in the several casals of the island, was in the ratio of their degree of communication with the sources of infection, our author goes on to adduce evidence of an impure state of the atmosphere being insufficient to account for the generation of plague. He tells us, that the fourteenth regiment were preserved from the contagion by vigilance, although quartered in the most infected part of Valetta; and that another regiment was infected, notwithstanding it was stationed in the most healthy situation in or about the place. How is it, he asks, that Valetta should have been for a long period the *exclusive nidus* of pestilence, seeing that there were villages and towns in the island, where every tangible cause of local impurity existed in a still greater degree, and which places were known to be much more frequently unhealthful than this city? Why were not those places visited in the first instance? And, finally, is it consistent to suppose plague an atmospheric disease, when the island had been free from its visitation during a period of one hundred and thirty-seven years?

That plague does not universally affect is no proof, according to Sir Brooke Faulkner, that it is not a communicable distemper, since non-susceptibility may exist to a great extent in many individuals; and, that it arises and disappears at certain determinate periods of the year, independently altogether of any interference on the part of the police, is an assertion (he says) unsupported by fact; 'as the disease is known to commence in the same country under every diversity as to the seasons; in proof of which we need go no farther than the last two plagues of Malta, the former having commenced in the month of December, three months previous to the time of its appearance in 1813.'

The doctrine which Dr. Hancock's volume is designed partly to support, is, that 'while plague is destitute of that specific something which is attributed to it by the hypercontagionist, its virus is capable of being communicated from one individual to another under certain circumstances; that although it is thus a communicable distemper, it is capable of spontaneous origin, and has much more reference to place and circumstances than many are disposed to allow; that quarantine enactments are founded in mistaken

mistaken views respecting the essence of pestilential visitation; and that fevers generally have much less of specific peculiarity, than systematic authors for the most part ascribe to them.'

Dr. Mead, the most celebrated writer of his day on the subject of plague, is an advocate for contagion. This author, however, admits, and the concession is marked by Dr. Hancock as a matter of much moment, that 'it has never been known where the plague did not first begin among the poor,' 'that a corrupt state of the air attends all plagues,' and 'that fevers of extraordinary malignity are the usual forerunners of plague.' Dr. Russell, another writer of celebrity on pestilence, likewise, says Dr. Hancock, 'candidly admits, that quarantine and other regulations have often proved ineffectual in arresting the progress of plague—that it has frequently occurred insidiously when they have been rigidly enforced, and in a more extraordinary manner has ceased, when they have been entirely relaxed.' And although he too is a decided contagionist, there is scarcely any writer who has laid so much stress as Dr. Russell on what has been termed a pestilential constitution of the atmosphere.

But, says Dr. Hancock—

'Dr. Maclean adduces many specious arguments in support of his opinions. He has collected a number of interesting facts, and has brought together some useful general observations respecting the prevalence and decline of plague in different countries; and it cannot be denied that he possessed many advantages, and had good opportunities of investigation, as he resided for some time in the Levant for the sole purpose of observing the nature and progress of this formidable disease. Yet I cannot perceive that he ever witnessed its devastations or its career when raging as a pestilence.

'When, however, Dr. Maclean's confidence in his own opinions led him so far, in the face of direct proof, as to brave the destroyer in his den, the pest-house at Constantinople; though we may applaud his resolution as well as his sincerity, and give him due credit for the ingenuity with which he seeks to explain the fact according to his hypothesis, we must, I think, reasonably doubt his principles, when we find that, by his own statement, he was attacked with this *non-contagious* malady on the fifth day after he entered that nursery of pestilence!'

In adverting to the work of Faulkner, he observes, that 'had as much pains been taken to procure further information respecting the concomitant circumstances of the period, as have been employed to establish a position which few are found to deny in a properly qualified sense, the volume would have proved more serviceable and important.'

'We have, indeed,' says Dr. Hancock, 'seriously to lament that most writers have attached themselves to this or that side of the argument so exclusively as to strain the simple bearing of facts to their own hypothesis;

hypothesis; to make a record only of these, and to keep out of view almost every circumstance of an opposite tendency. Hence what contrary statements, and marvellous, nay almost incredible, recitals do we find in authors, both ancient and modern, who have treated of this subject!'

'Contagion, according to some, has been locked up in holes, and caves, and chests; it has even made its hiding-place a spider's web, and at particular times, as by mere accident, has been released from its imprisonment to desolate the earth! According to others, comets and meteors, planetary conjunctions or appositions of baneful influences, volcanic eruptions and malignant blasts from the earth during its convulsions, have corrupted the air with pestilential steams for the destruction of the human species!

'*The first class have left us in ignorance by what laws the contagion ceased after its sources were so incalculably multiplied; and the last have not explained how a wide spreading evil like the vitiated air still left millions untouched.*

'And these two predicaments would seem to include the principal difficulties of the argument.

'One general fact should be noticed, that no people in the world have been willing to acknowledge their own country to be the first or indigenous seat of pestilence.

'Even Ethiopia, condemned beyond all others, the supposed nursery of plague from the time of Thucydides to Mead, where putrefaction is said to concoct and sublime its most deadly poisons, has its seasons and situations remarkable for salubrity, in which health cheers the native as well as the stranger; and authentic histories of that country by no means confirm the imaginary terrors of its climate; nor do they record any plague so fierce and destructive as what more temperate regions have often experienced. For those who have resided and travelled in Upper and Lower Egypt, as Alperius, Savary, Volney, and others, so far from admitting that plague is indigenous, gravely tell us of its importation from Constantinople and the coast of Syria.'

The plague which prevailed in London in the year 1665, is supposed by some to have been imported; by others it has been regarded as indigenous. Dr. Hancock has therefore thought it right to investigate the circumstances of this epidemic, to trace it through its progress, and occasionally compare it with others, as a general example illustrative of the laws by which pestilence seems to be governed. The points for consideration are, 1st, The adventitious circumstances connected with this plague. 2dly, Its progress from one part to another. 3dly, The character that it assumed at its commencement, height, and decline. 4thly, The persons and places that were exempt. 5thly, The facts deduced from the bills of mortality; and, 6thly, our author takes a summary review of the whole.

The adventitious circumstances were disease among cattle, a crowded

crowded population, a long continued calm in the weather, and the appearance of common disorders under types different from those which they usually display. Quotations from the works of Sydenham, Hodges, Baynard, Hooke and Boyle, in proof of these statements, are introduced into the work which we are now reviewing. The author then proceeds to trace the progress of the plague as accurately as the records permit him. In the latter end of November or beginning of December, two men, said to be Frenchmen, died of the disease at the upper end of Drury Lane; about three weeks after another man died in the same house of the same distemper, and about six weeks after the last death another died in another house, in the same parish, in like manner. 'Now it was observed, and the fact, which the weekly bills of mortality place beyond a doubt, is very curious, that from the time the plague first began in St. Giles's, *the ordinary burials from other diseases increased considerably in number in that and all the adjacent parishes.*'

'It was not till the beginning of May, or five months after the supposed introduction of fomites into St. Giles's, that a case of death, or even of infection, was reported to have taken place within the walls of the city. This occurred in Bearbinder Lane. It was found on inquiry that this was a Frenchman, who, having lived in Long-Acre, near the infected houses, had removed for fear of the distemper, not knowing that he was already infected.'

In the second week in June four died within the city; and now, the weather having 'set in hot,' the mortality soon increased, and the disorder was particularly prevalent and fatal in St. Giles's. About the middle of the next month 'the disease, which had chiefly raged in the parishes of St. Giles, Andrew, Stephen, and towards Westminster, came to its height there, and began to travel eastward,' *always abating in one direction as it appeared more malignant in another.* It was about the 10th of September that the disorder came to its height, at which time more than 12,000 died in a week, though two thirds of the inhabitants of the metropolis had gone into the country. Not one house in twenty was uninfected, and 'it looked as if none would escape; but just then,' says the writer whom Dr. Hancock copies, 'it pleased God by his immediate hand to disarm this enemy. Nor was this by any new medicine, or new method of cure discovered; the disease was enervated and the contagion spent. Even the physicians themselves were surprized; wherever they visited they found their patients better.' It is worthy observation that before the number of infected decreased, the malignity of the distemper began to relax, so that now few died; and it is further remarkable that the chief sufferers were those who had recently

cently arrived from the country. The *nature* of the disorder, as it is expressed by Hodges, having undergone a change, ‘ we were now,’ says the journalist, ‘ no more afraid to pass by a man with a white cap upon his head, or a cloth wrapt round his neck, or limping from sores in his groin—all of which were frightful to the last degree but a week before.’ Another curious circumstance was, that the *disease did not visit the provinces till its rage had been expended in the metropolis,* only one instance having occurred of the plague existing at the same time in London and the country. The provincial town thus infected simultaneously with the metropolis was Southampton, ‘ and it is very remarkable,’ says Dr. Hancock, ‘ that we should not have some authentic document to prove in what manner the disease was at so early a period introduced into Southampton, if it was entirely dependent on contagion for its propagation.’

Having thus discussed the general circumstances connected with the last plague of this country, Dr. Hancock proceeds to remark on the time when pestilence usually appears, and the subjects it chiefly attacks. He states, and appeals for the truth of his statement to the histories of several pestilential visitations, that the poor are always the first subjects of the distemper, and that the season of pestilence is mostly the latter end of spring. In Egypt it is otherwise, and perhaps also in countries subject to a *malaria,* or endemic marsh fever, where the autumnal months are most sickly.

Pestilential visitations have been, our author affirms, for the most part marked by general sicknesses; by a more than usual number of insects; by blights, mildew, deaths among animals, and many other indications of something in the atmosphere unfriendly to the well-being of man. He has taken great pains to cite authorities in proof of this affirmation, and the section of the book in which these particulars are adverted to concludes in the following manner.

‘ Thus we see that philosophers, poets, ancient historians, and physicians, speak as it were one language, and sound one note of warning; and even the sanction of Holy Writ may, without forced comment, be applied in support of the general principle. *Whilst a single idea that seems in its practical effects to exclude all other considerations—the dread of foreign contagion—upon this point engrosses the concern of all the most enlightened statesmen of the most civilized countries in the world.*’

It has already been noticed that, even by the admission of Mead, ‘ fevers of extraordinary malignity are the usual forerunners of plague;’ and this author (Mead) attributes this circumstance to ‘ that ill state of air which attends all plagues.’ At times, however, it has been observed that at the approach of pestilence, even before

before the distemper has actually manifested itself, other diseases become less general and fatal. Mertens, for example, states that the epidemic diseases which had raged for three years previous to the plague at Moscow, altogether vanished in the month of May, 1770; and in the spring of 1771 began the plague. Dr. Hancock supposes that something of this kind may have been the case in relation to Malta before the occurrence of the last plague in that island; and he thinks that, so far from the allowed fact making in favour of imported contagion, the very reverse is the legitimate conclusion.

'For by what combination of causes, it might be fairly asked, should the common prevailing diseases be banished as it were from a city or country at the very critical juncture when a disease of foreign growth, with which they have no natural connexion, is casually introduced amongst them? Do they hide their diminished heads, or flee away as from the presence of an unwelcome stranger?

'By what singular change in the elements of life should not only this effect take place, but a portion of unusual health be imparted to those whose peculiarity of constitutions enables them to resist the fury that is dealing destruction around them?'

That a few months bring to a period the most formidable of plagues in the generality of instances, although multitudes remain susceptible of contagion, is a presumptive evidence, Dr. Hancock thinks, in favour of the dependence of the malady upon atmospheric malignity; and, moreover, the progressiveness observed in its movements from place to place, to which allusion has already been made, seems inconsistent with the notion of a conveyed virus merely. It goes from the city to the country, from one country to another, 'and in each the disorder, modified however by various causes, passes through its several stages,' its decrease, like its increase, being moderate—its periods, too, being nearly the same in crowded, filthy and ill regulated cities, as in those where all the regulations of the strictest healthy police are enjoined and observed; proofs these that there is a power stronger than contagion to control its effects, and a power stronger than medicine to change the character of the disease.

'He, therefore, that, exclusively believing in a contagious virus, asserts medicine and police regulations can do all, and attributes the removal of pestilence solely to their means, may be as much in error as he who, convinced of a general contamination in the air, denies contagion, and believes a crowded or a scattered population would make no difference in the mortality; or that a filthy habitation would add nothing to the malignity of the distemper; and that, as the disease is from the air, it matters not whether he stands idly gazing on till it shall cease, or assists to remove a local nuisance out of the way.

'Hence it is clear there must be a proper medium between these opposite

opposite views, which alone the cautious observer and the wise physician can pursue with safety.'

The circumstance of particular exemptions is strong in favour of something peculiar in the nature of pestilence beyond its contagious properties. In a plague at Bath no Italians, nor Germans, nor French became the subjects of the disease. And at Hafni, in Denmark, during a wide spreading pestilence, all strangers, as English, Dutch and Germans, escaped, notwithstanding they lived promiscuously in the infected habitations. The sweating sickness of 1485 attacked only Englishmen, who did not escape even by travelling into France or Flanders. Wilson says that in Egypt some of the villages were exempt from the plague, while the most neighbouring were desolated. This is so common, that the inhabitants particularize to Europeans those villages in their districts which, during the season, the plague has appeared in, yet do not themselves refuse to enter them.* And there are some instances of different liabilities not only from natural constitutions, but incidental and adventitious circumstances. Dr. Maclean lays considerable stress, as we have seen, on the dread of contagion, and he supposes the danger is lessened to the Turks in proportion to their exemption from such fears. On this particular our present writer remarks—

'It is a nice point to determine, putting humanity out of sight, whether a notion which tends to separate individuals from each other, and therefore to lessen the concentration of febrile miasmata, be not more likely to lead to security than an indiscriminate confidence or fatalism which crowds them together; and I cannot but suspect that if fear on the one side, and assurance on the other, exert any influence in predisposing to the disease, or exempting from its ravages, the disciples of Dr. Maclean would run the greatest risk.'

It will be inferred from what has already been advanced, that Dr. Hancock regards the allegation of imported contagion in the

* In Sir Robert Wilson's examination before the Committee of the House of Commons, we find the following striking fact, to which Dr. Hancock alludes, stated in reference to partial immunities. 'I would wish also to remark, that as we moved through the country the inhabitants pointed out to us particular villages that were infected with plague, and which plague did not extend out of those particular villages to any contiguous villages, although there was no precaution whatever used as to the communication with the inhabitants of the infected villages.' And a statement in Mr. Legh's Travels in Egypt contains a very pointed illustration of the different susceptibilities of different places:—'The plague in 1812 raged in Constantinople and throughout Asia Minor, yet, although the communication between this city and Alexandria was uninterrupted, the latter remained perfectly free from contagion. At the island of Scio, distant but a few hours sail from Smyrna, where the plague was raging with violence, and whence persons were daily arriving at the island, the British Consul observed "that he had no fear of infection being communicated from Smyrna; but (said he) should the plague declare itself at Alexandria, several hundred miles distant, we shall certainly have it at Scio."' —*See our review of Legh's Travels.*

plague

plague of 1665 as more than doubtful. He devotes a considerable portion of one section of his work to point out that discrepancy in evidence relative to the supposed importation, which would render the matter exceedingly difficult of belief; but when we take into consideration the state of things external and internal *at the precise period when the imaginary visit was paid*, it would seem a strange coincidence for every thing thus to concur, in order to accomplish the dreadful purpose that was brought about.

It is a curious fact, that Oxford was exempt from the plague of 1665, while it raged in most parts of the kingdom besides, although the terms were kept in that place and 'the courts and both houses of parliament did there reside;' and it is further remarkable that at the same time that city was considered as more troubled than usual with small-pox. This exemption was attributed, and Dr. Hancock thinks justly, to the great care taken to ensure the cleanliness and constant draining of the place, and he seems to imply that the superiority of Oxford in reference to these particulars was equal to the counteraction of that condition of the atmosphere which was the cause of plague in other places, but that it had not sufficient controul over the elements to prevent the manifestation of consequent disorder in another shape.

Why, it has often been asked, has plague not appeared as an epidemic in London since the year 1665? This immunity some ascribe to the constant use of pit-coal, which, from its sulphureous quality, has proved an antidote; by others it is conceived that the steady operation of our quarantine laws has succeeded in preventing it. But Dr. Hancock is not a believer in either of these notions, for coals were in use long before, 'and no one can doubt that goods have often been landed in this country since, if not saturated with contagious effluvia, certainly deeply imbued with the air of infected cities. So that if any *seminium* from abroad could act as a leaven in gradually corrupting the air of our climate, it might as well be done perhaps by the pestilential air necessary to the diffusion as by the contagion itself.'

When the circumstances of this great town are compared and contrasted in respect of cleanliness and comfort with those under which it was at the time of the last plague, we shall not have to wonder, says Dr. Hancock, at its comparative insusceptibility also to formidable distempers; and he announces it as his opinion, that the plague has in fact been often in London since the period referred to, but from want of the nidus of filth, and the fostering circumstances of inattention or mismanagement the disease has never mounted higher in the scale of malignity than common contagious fever. 'If we look at the state of London in the middle of the seventeenth century, and compare it with the pre-

sent, we shall cease to wonder that it has become of late years far more healthy. The mortality in 1697 was 20,970, whereas in 1797 it was only 17,014;' and it will be found that the more recent occurrence of plague in some of the larger cities of Europe, are fairly attributable to their defective condition in respect of those particulars to which the present salubrity of London is so largely indebted.

That we have not been defended against plague by the operation of quarantine establishments may be fairly inferred, Dr. Hancock conceives, from the remarkable fact, that none of the expurgators of goods in Great Britain at these establishments have ever taken the plague since their origin; and the same immunity has been enjoyed by the establishments of other countries. The commencement of the Marseilles plague has been alleged as forming one of the exceptions to this immunity; but Dr. Hancock denies that the rumoured importation of plague into Marseilles is sufficiently entitled to credit in opposition to the general experience. 'If we consider,' says he, '*where* it broke out, if we consider the previous diseases in the city, the state of the famished poor, the entire want of evidence as to any communication between the Rue l'Escale and the suspected ships or lazarettos; if we take into account that physicians on the spot would not at that time admit the disease to be plague, we cannot possibly receive the report as an axiom to build upon.' And how is it, asks our author, that the lazarettos have not preserved Cadiz and other towns in the south of Europe? In these places indeed the fevers that go under the denomination of plague, and are ascribed by many to foreign importation, are so clearly characterized by indigenous peculiarities, as to render their local origin almost a matter of demonstration. Our author's opinion on the evidence to be deduced from quarantine is summed up in the following terms.

'Now if we ascertain that in some countries, where quarantine is strictly enforced, pestilential diseases do notwithstanding find entrance; that in others, where plague has raged before, under other circumstances, though carelessly administered, the disease has not made its appearance for more than a century and a half; that in others, where the regulations are entirely dispensed with, the disease exhibits itself only occasionally, and obviously in connexion with a peculiar state of indigenous circumstances, or extraordinary phenomena in the seasons, &c.; that in others, where importation has been presumed, the fact, on investigation, has always been so clouded with improbable conjectures as to cause the most serious doubts of inquiring persons on the spot; that at most of these establishments no well authenticated instance of death in the frequently laborious and supposed hazardous employment of expurgation has taken place; and that n every country where plague has prevailed, circumstances of a particular nature, variously modified,

modified, have existed, it should then appear that, in connexion with other views of the subject, a very comprehensive body of facts is within reach, for the impartial consideration of those whom quarantine may immediately concern.'

In another part of his work, Dr. Hancock more particularly dwells upon the necessary inefficiency of quarantine in preventing so subtle a principle as contagion from making good its lodgment on our shores, especially under the proverbial laxity in the administration of its enactments. 'No one doubts that many a bale of merchandize, both silk and cotton, from our regular intercourse with Turkey, must have been often introduced to this country during the long interval from the last appearance of the plague to the present time, brought directly from infected cities; I will not say infected, but touched by infected hands, and packed in infected air.—Therefore I cannot but subscribe to the conclusion of Dr. Heberden, that our exemption from plague is not so much to be attributed to any accidental absence of its exciting causes, as to our change of manners, our love of cleanliness and ventilation, which have produced amongst us, I do not say an incapability, but a great unaptness any longer to receive it. Any improvements which our quarantine laws may have undergone are by no means adequate to such an effect.'

The concluding chapter of Dr. Hancock's volume is composed of a few intimations respecting the want of specific character in some other diseases besides plague that are by many regarded as definite, and communicable distempers, such as the yellow fever of the western continent and islands, and the typhus of London. Because these are occasionally communicated from person to person, and perhaps by fomes, it is a mistake to conclude therefore that they are not often spontaneous and sporadic; our author likewise alludes to that principle, to which especial reference will be found in the first part of the present paper, viz. the extensive operation of external and adventitious circumstances upon the aspect and apparent nature of morbid affection. In the following extract the reader will perhaps perceive a similar intimation to that which we have ourselves given on the head of diseases assumed almost universally to be specific and permanent in their habits and relations. 'I am inclined to think the practice of inoculation, and still more that of classifying diseases, which depend on many causes, and are liable to many changes, as we do the stable and permanent characters of the subjects of natural history, have given an unscientific turn to our views both in regard to the origin of, and differences between, what are termed specific contagions, and what are not; and I suspect we

shall have something to unlearn before we get into a proper train of investigation.'

In the Appendix he proposes to give a few particulars relative to the plagues of Morocco in 1799; of Malta in 1813, and of Noya in Naples in 1816. Jackson, from whom he takes the account of the first, alludes to the famine which had recently pervaded the country, 'and which was produced by the incredible devastation of the devouring locusts,' of the birds of the air flying away from the abodes of men, and of fear having an extraordinary effect in predisposing the body to receive the infection. In reference to the plague at Malta, Dr. Hancock attempts to point out some discrepancy in the statements with regard to its origin. The president of the college of physicians thinks 'it might have originated from the lazaretto, where persons from Alexandria had it.' Faulkner supposes it 'not improbable that some of Salvatore Borg's family, among whom it first appeared, might have got goods from the infected vessel.' Dr. Calvert, not satisfied with this report, gives the contagion a more aerial passage, and is strongly inclined to think that it travelled through the air from the lazaretto to Valetta, and lighted upon the daughter of Salvatore Borg.' But the people of the island, according to Dr. Granville, firmly believe that S. Borg, who was a shoemaker, had purchased some linen to line shoes from a Jew, *who had received it from* Alexandria. Tully too and Faulkner disagree in their accounts respecting the healthiness of the island; and from the statement of the former, that 'the more insidious the first commencement of a plague, the more destructive is its ultimate progress,' Dr. Hancock maintains that it is incomprehensible how such a law should be developed upon the plain principle of foreign contagion propagated by contact only. Again, says Dr. Hancock, there is an inconsistency in the assertion of Faulkner, that the di ease had no reference to the air, when he accounts for its not be^{s}ng more rapidly diffused at first 'by *the state of the air*, and othier circumstances not *favouring* its contagious power in so great a degree as afterwards.' Further, the small island of Gozo, near Malta, was not visited till about eleven months after, and, what is singular, in the preceding plague of 1675, 'a considerable interval elapsed from the contamination of Valetta until that of Gozo:' and it is likewise very important to know, that *at this time, and a year previous, the plague was raging in different parts of the Levant.* In 1813 and 1814 it also raged on the banks of the Lepanto, on the shore of Albania and the neighbouring coast of the Morea, in Bucharest, Wallachia, Alexandria, &c. The whole range of coast from Albania to Spalatro, in the immediate

immediate neighbourhood of the Ionian islands, was in 1815 infected with plague to a great degree.

With respect to the Noya plague, it appears from the evidence of a writer in the Quarterly Journal of Foreign Medicine, that 1st, the disease was preceded by famine. 2d, it began among the poor. 3d, other diseases with which it might be confounded prevailed at the time. 4th, it was various in its appearance and not very contagious at the commencement. 5th, the south wind increased its spread. 6th, the individual who conveyed the smuggled goods was not affected. 7th, the nature of the disease was doubtful. 8th, it continued about six months, and then, like most of the plagues in that climate, ceased.

Granville and Tully are at variance with respect to the commencement of this plague. The former, on the authority of an official report, says, it *certainly* came from Dalmatia; while the latter observes, that, 'although the source from whence it was introduced is still involved in obscurity, the most fastidious inquirer cannot oppose its foreign origin.'

Tully and Granville likewise disagree with respect to the introduction of pestilence at Corfu in 1815, one tracing it to the distribution of a number of skull-caps of red cloth left in the island by the captain of a vessel from Tunis; the other to a large box deposited by a man of the name of Spiracchi in the house of his friend Potiti, which was opened after the lapse of more than a year by Potiti, Spiracchi not having returned. Dr. Hancock then refers to the omissions of Tully respecting the particular state of the weather, and the prevalence of indigenous maladies, and concludes the whole of his investigation by the following remarks,—

'Now what do all the uncommon circumstances stated in different parts of the volume relative to this event; as of rains earlier than usual —of long drought and heat unnatural for the season of the year—of constant sirocco—of malignant fever in a marshy soil, raging amongst a miserable, and wretched, and ill-fed population—of unprecedented severity in the weather—of the ravages of pestilence following and giving place to remittent fever—of a sickly season setting in far earlier than usual, hurrying all alike into disease—what do these things mean, if they are not all connected in causation as well as in series?

'It appears to me therefore, and I am far from credulous, and (but) earnest to discover the truth in this perplexing obscurity of fact and testimony, that he must be an infinitely greater sceptic who can disbelieve such a connection, than he who doubts the contradictory stories of Spiracchi's box and the skull-caps of red cloth from Tunis, brought into Corfu by stress of weather and distributed in Lefchimo.'

We have thus redeemed the pledge which we placed in the reader's hands. We have caused to pass in review before us the leading facts and most weighty arguments from which the doc-

trine of specific contagion in plague is maintained by one, modified by another, and rejected by a third party; and we shall here limit ourselves to a remark or two on the contrasted statements of Sir Brooke Faulkner and Dr. Hancock; since the absolute verification of either one or the other of their assumptions might be supposed decisive of the question. Now, no one can deny that the testimony of such a writer as Sir Brooke Faulkner, founded as it is on a simple record of occurrences, constitutes a considerable weight of evidence in favour of imported contagion—nay, it is next to impossible to doubt the connection of the San Nicolo's arrival with the breaking out of pestilence on the island of Malta; and, upon the whole, we are called upon to give it as our unbiassed opinion, that a stronger case was never adduced in support of the principle for which its narrator contends.

It may, however, be permitted us to pause before we allow that an unqualified admission of all Sir Brooke Faulkner's data and inferences would absolutely establish the fact of an abstract, and, if we may so say, *uncircumstantial* power possessed by the contagious virus; and let the reader refer back to Dr. Hancock's intimations respecting the latitude of the island, the simultaneous existence of plague on some of the shores of the Levant and Mediterranean, and the probable condition of Malta itself in reference to its diseases, before he fully makes up his mind whether the arrival of the San Nicolo, under precisely similar circumstances, in the port of London or of Liverpool, would have been followed by the same results.* On this head we confess that we entertain considerable doubts, conceding, at the same time, that Sir Brooke Faulkner has placed a greater difficulty in the way of the anti-contagionist than before existed. Prior to the accounts of the Maltese pestilence, the circumstances connected with the appearance of plague at Moscow and Marseilles, constituted perhaps the greatest impediments to a reception of the anti-contagious creed; but still, in both these instances, a minute inquiry into particulars brings to light several considerable flaws in the evidence favouring absolute and abstract miasm; while the statements of Sir Brooke Faulkner do not appear, to say the least of them, quite so vulnerable. But, in whatever way we decide in reference to this particular, certain it is, that, on the other hand, Dr. Hancock has brought forward a vast body of testimony of the most unequivocal kind, illustrative of the proposition, that the origin, spread, and decline of pestilence has, for the most part, more re-

* Sir A. Brooke Faulkner admits that this very vessel was sent back to Alexandria with her infected cargo; and 'that none of the persons who navigated her back took the plague but arrived in perfect health;' and he believes that 'they who assisted in landing the cargo were not affected.'

ference

ference to the local peculiarities of the soil and climate in which it appears, than to any foreign importation; and that plague, if it be sometimes a contagious and transportable, is, for the most part, an indigenous or endemic distemper.

Let the fact be recollected as one of extreme importance, that pestilential disorders have been much on the decline since the advance of civilization, and that, for the most part, they only still prevail in countries and districts, where the habits of the people are such as are known to be conducive towards fanning contagious poison into malignant disease. 'It is remarkable' (says Sir John Pringle) 'how much the plague, pestilential fevers, putrid scurvies, and dysenteries have abated in Europe within the last century; a blessing which we can ascribe to no other second cause than to our improvement in every thing relating to cleanliness, and to the more general use of antiseptics.'

The remarkable exemption of Persia from the plague has been noticed by a great number of writers—remarkable, inasmuch as contiguous countries have been the greatest sufferers from pestilential visitations. For this exemption the Persians are obviously, in part at least, indebted to their peculiar habits, 'they are the most cleanly people in the world, many of them making it great part of their religion to remove filthiness and nuisances of every kind from all places about their cities or dwellings.' And, not to multiply instances of liabilities and exemptions in places and persons, we are warranted, it is conceived, in stating generally, that where lands are elevated, the climate temperate, and the soil dry, there pestilence of all kinds is of the least easy induction;—that, on the contrary, where the lands are low and swampy, the temperature hot, and the air at the same time humid;—there, more circumspection and care are required on the part of the inhabitants to counteract, by artificial means, endemic insalubrity;—and, during the last century, the greater part of Europe has been most happily and efficaciously acting upon this principle—swampy lands have been drained—waste marshes cultivated—filth removed from our cities—air made to circulate through our dwellings—superstitious apprehensions respecting pestilential visits considerably lessened—and (in consequence shall we say, without incurring the charge of assuming where we ought to prove?) the greater part of Europe, and our own country and cities in particular, instead of harbouring and fostering contagion into venomous, and permanent, and wide-spreading pestilence, have merely 'afforded a *short and niggardly entertainment* to the mildest form of contagious fever!'

Before we conclude, it may be expected that we should say a few words respecting the probable manner in which infectious

miasmata are made to influence the frame. Is contagion absorbed occasionally through the surface of the body, or are the lungs its only inlet? The former is the opinion most generally received, and acted on, but it may be regarded as of questionable foundation. Some phisiologists indeed doubt whether, while the outer skin is whole and entire, it be at all permeable to the most minute and subtle matter from without; and whether every thing, both salutary and noxious, does not find its way into the system either through the lungs or the stomach? Lay, for example, the saliva of a rabid animal, the matter of small-pox, or that of vaccinia upon the skin merely, and you fail to inoculate with the diseases. It is necessary that the cuticle be abraded or punctured before the absorbents can receive the poison. But, on the other hand, it is urged that infectious effluvia, from their higher divisibility than the poisons referred to, may possess the power of penetrating through the scarf-skin and thus impregnate the body. In reply to this suggestion, others have urged the case of natural, as opposed to inoculated small-pox. Here we find the disease taken from secreted matter is as impalpable, and most probably in as minute form, as when sickness is the result of other infections; and yet this material, when it is concentrated into a tangible existence, and thus most probably possessed of higher power, must be made to enter the body by puncture or scarification. Neither does this poison affect as a contagious substance when received into the stomach. Dr. Rush informs us, that he gave a negro girl some variolous matter mixed with a dose of physic, and that no sensible effect was produced. It is, therefore, we repeat, highly probable, not however by any means certain, that the sole vehicle by which contagious or infectious influence operates upon the body is the lungs. This is not, of course, a matter of mere speculative curiosity; for, could it be certainly ascertained that the outer skin forms that barrier which we are inclined to believe it does, against the intrusion of a morbid poison, it would follow of course that there need be less scruple about handling the sick, and performing acts of sympathy and duties of humanity towards them, provided we carefully kept from immediately inhaling their breath; at all events, we believe, that those expedients are idle and fruitless to which recourse is had for the purpose of defending against impregnation by infectious miasmata, such as feeling the pulse through the medium of a cabbage-leaf, oiling the surface of the body, &c. and here, we may remark, that in our minds that notion is altogether ill-founded which attributes a preventive efficacy in cases of fever, to certain materials, such as camphor, and aromatic oils, and perfumes, which are, probably, all of them worse than nothing. The best, the only preservatives, are cleanliness and ventilation,

ventilation, joined with a firm but not presumptuous confidence in the protecting power of Providence.

As a result of the whole inquiry the following corollaries appear to us to be pretty fairly made out—That all, or at least the greater part of morbid poisons are in some inscrutable way the produce of the clime and country in which they originally appear —that they are materially modified by time, and by the intercourse of nations, so much so, as in some cases to lose eventually their primary characteristics and habits—that some are much more permanent in respect of their specific peculiarities than others—but that *all* are, in a greater or less degree, subject to the modifying influence supposed—that those which are the most fixed, or the least changeable in their external habits and essential peculiarities, are the most easily conveyed from one country to another—but that there are few, if any, that may not be transported from the place which gave them birth, and transplanted into foreign soils; where, however, some will soon die away, or be changed into other forms and essences according to the natural tendencies or artificial habits of the new regions in which they have arrived, while others will retain for centuries a sufficient degree of peculiarity to mark their actual essence through all their variety of modification—that man can accomplish much towards mitigating the malign agency of contagious poisons—and that progress in the arts of civilization and improvements in polity have disarmed epidemics of a considerable portion of their power. Finally, it does not seem probable that the metropolis of England can ever receive from the shores of the Levant a sufficient measure of contagious miasmata to cause the existence or prevalence of positive plague—but, as some degree of uncertainty necessarily connects itself with our conclusions on subjects which, from their very nature, are insusceptible of absolute demonstration, it will be the part of a wise policy rather to err on the side of caution, than that of precipitancy or presumption. It is, however, to say the least, highly questionable whether laws framed for the purpose of preventing the intrusion of pestilence might not be much less restrictive, and expensive, and vexatious than they actually are, and at the same time equally, if not more, effective.

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